Could add:
① Embankment Stability
Locate Benchmarks for Permit Survey
② Water Level – Open well piezometers
③ Leachate Operation

Worked on additional comments 5/24/82

WHITE RIVER SHALE PROJECT
MINING AND RECLAMATION PLAN REVIEW COMMENTS

M-3(1)(e)

It is impossible to determine the extent to which the runoff retention or holding pond will treat disturbed area drainage. How many acres of disturbed and/or undisturbed drainage will be treated? The watershed should be delineated as such.

Figure 1-7 shows the location only of the evaporation holding pond for treated wastewater effluent. What is this pond sized for? What is the daily flow rate entering the pond? Give approximate quantities of the various processing flow rates which will be passed into this pond.

Section 1.3.3.5 states that part of the water supply will be provided by alluvial wells. These water rights must be included in those appropriated by the State Engineer. Groundwater which is intercepted (after grouting attempts are made) and utilized on the surface must also be appropriated by the State Engineer.

M-3 (1) (h)

WRSOC proposes to use berms and ditches to control runoff during construction. OGM does not concur with the statement made in Section 1.2.5 of the application that "occasional runoff from the construction sites will result in water flowing down natural drainage". Even though the proposal calls for structural controls, every effort should be made to control sedimentation at the source and prior to entering the natural drainages until the runoff retention pond is completed.

M-10(8)

The drainage plan map indicates that surface runoff will be conveyed over, under and through certain access and on-site roads. What event criteria will be used for culvert design?

M-3(2)(c)

What and where are the "approved disposal areas" for trash, etc.?

M-3(2)(c)
M-10(4)
M-10(6)

Waste rock will be crushed to what size? Have any tests been conducted on the pyritic content and susceptability for acid development? Does the use of this rock in shale embankments refer to an outer coating on the shale fines storage or spent shale disposal slopes or . . .?

M-3(2)
M-10(2)

No reference was found in either the Mining and Reclamation Plan nor to any great extent in the DDP to any discussion or investigation into the potential for subsidence effects. Owing to the laminated, thinly bedded and variable type of overburden in addition to the relatively near presence of the Birds Nest aquifer, further attention should be given to the possiblity for subsidence, including possible moonitoring and mitigation measures. A more comprehensive treatment of the subject is requested.

M-5

Scheduling involves nine years development and mining one year projected for dismantlement and two years for revegetation, plus three years monitoring. Bond will need to be applied for 15 years for Phase I for 635 acres.

M-6

Where were the cross sections A-A', B-B' and C-C' taken? A map should be submitted which includes where the lines were obtained.

Although the WRSP deals for the most part in conceptual designs, it is requested that an estimate of the amount and extent of underground mining which will occur during Phase I be submitted to the Division. Figure 1-9 of the MRP does not indicate if this mining layout is proposed for any estimated amount of time in particular. A plan should be submitted locating the extent per year of underground mining activity (perhaps color coded by year) for the life of Phase I. This would be utilized to enbable the Division to better understand the entries room and pillar design in relation to the surface facility construction. These surface facilities should be superimposed upon the map similar to map Fig 3.5-6 in the DDP. A 1" = 200' scale is suggested.

M-10(2)

Has the pillar size around gas weels been designed yet? If so, what criteria were used in development of reasonable safety factors? If not, a commitment to submitting these data to the Division piror to mining should be made. Will the #1 gas well be intercepted by mining during Phase I?

M-10(2)
M-10(7)

Where will the WRSP dispose of the ripped road pavement? A design specifically addressing volume and storage capabilities should be submitted.

How deeply will the concrete foundations be buried after having been broken up upon reclamation?

M-10(10)

What specific designs have been developed for the permanent closure of portals, shafts and declines?

M-10 (13)

WRSOC proposes to leave certain impoundments as evaporation ponds with dams enclosed and placarded except for the runoff retention dam which will be fenced and placarded. The State of Utah requires the applicant to leave all impoundments in a self-draining mechanically stable manner at the time of abandonment. By retaining runoff for evaporation this requirement will not be met for either dams or impoundments as described in M-10(3).

WRSOC must appeal to the Board of Oil, Gas and Mining for a variance to this regulation if it is desired to leave dams and impoundments on site. If the Board agrees to a variance then a post-abandoment maintenance agreement must be worked out with the land owner(s) to assure the health and welfare of people and animals is not threatened.